

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO**

DINÉ CITIZENS AGAINST RUINING
OUR ENVIRONMENT, *et al.*,

Plaintiffs,

v.

Case No. 1:19-cv-00703-WJ-JFR

DAVID LONGLY BERNHARDT,
in his official capacity as Secretary of
the United States Department of the
Interior, *et al.*,

Federal Defendants.

FEDERAL DEFENDANTS' RESPONSE
TO PLAINTIFFS' OPENING MERITS BRIEF

TABLE OF CONTENTS

INTRODUCTION	1
BACKGROUND	2
I. The National Environmental Policy Act.....	2
II. Oil and Gas Development on Federal Lands.	3
III. Oil and Gas Development in the San Juan Basin.	4
IV. Procedural History	5
A. <i>Diné CARE I.</i>	5
B. Intervening Developments.....	5
C. The Current Case.	6
STANDARD OF REVIEW	8
ARGUMENT.....	9
I. The Court Lacks Jurisdiction Over Unripe and Moot APDs.....	9
A. Plaintiffs’ Claims Challenging Unapproved APDs Are Unripe.	9
B. Plaintiffs’ Claims Challenging Expired APDs and APDs for Permanently Abandoned Wells are Moot.	11
II. The EA Addendum Properly Supplements BLM’s NEPA Analysis for the Challenged APDs.....	11
III. BLM Complied With NEPA.....	15
A. BLM Took a Hard Look at Impacts to Water Resources.	15
1. BLM Accounted for Slick Water Stimulation.	18
2. BLM Considered Impacts to Groundwater.....	20
B. BLM Took a Hard Look at Air Quality and Health Impacts.....	22
1. BLM Used Accepted Methodologies to Analyze Health and Air Quality Impacts.....	24

2.	BLM Accounted for the Total Lifetime Emissions of the Wells.	25
3.	BLM Considered Current Air Quality in the San Juan Basin.....	27
C.	BLM Took a Hard Look at GHG Emissions and Climate Change.....	30
1.	BLM Explained Its Methodology for Calculating GHG Emissions, Including Its Choice of Global Warming Potential.	32
2.	BLM Quantified Emissions Over the Life of the Challenged Wells.	33
3.	BLM Assessed the Significance of GHG Emissions.....	35
4.	BLM Had No Obligation to Use a Carbon Budget to Assess GHG Emissions.	38
D.	BLM Considered the No Action Alternative In the Original EAs.....	39
IV.	The Court Should Deny Plaintiffs’ Claims and Dismiss This Case, But If It Decides to Grant Relief, the Proper Relief Is Remand Without Vacatur.	40
CONCLUSION.....		42

TABLE OF AUTHORITIES

Cases

<i>Albuquerque v. Marsh</i> , 956 F.2d 970 (10th Cir. 1992)	3
<i>Alpharma, Inc. v. Leavitt</i> , 460 F.3d 1 (D.C. Cir. 2006)	14
<i>Am. Petroleum Inst. v. EPA</i> , 683 F.3d 382 (D.C. Cir. 2012)	10
<i>Amigos Bravos v. U.S. Bureau of Land Mgmt.</i> , No. 6:09-CV-00037-RB-LFG, 2011 WL 7701433 (D.N.M. Aug. 3, 2011)	18, 25, 27, 29
<i>Appalachian Voices v. FERC</i> , No. 17-1271, 2019 WL 847199 (D.C. Cir. 2019)	38
<i>Balt. Gas & Elec. Co. v. Nat. Res. Def. Council</i> , 462 U.S. 87 (1983)	8
<i>Bar MK Ranches v. Yuetter</i> , 994 F.2d 735 (10th Cir. 1993)	15
<i>Barnes v. U.S. Dep't of Transp.</i> , 655 F.3d 1124 (9th Cir. 2011)	36, 37
<i>Bennett v. Spear</i> , 520 U.S. 154 (1997)	10
<i>California v. Bernhardt</i> , No. 4:18-CV-05712-YGR, 2020 WL 4001480 (N.D. Cal. July 15, 2020)	39
<i>Catron Cnty. Bd. of Comm'rs v. U.S. Fish & Wildlife Serv.</i> , 75 F.3d 1429 (10th Cir. 1996)	9
<i>Citizens for a Healthy Cmty. v. U.S. Bureau of Land Mgmt.</i> , 377 F. Supp. 3d 1223 (D. Colo. 2019)	20, 25, 36, 37, 38
<i>Citizens to Pres. Overton Park, Inc. v. Volpe</i> , 401 U.S. 402 (1971)	8
<i>Colo. Farm Bureau Fed'n v. U.S. Forest Serv.</i> , 220 F.3d 1171 (10th Cir. 2000)	10
<i>Comm. to Pres. Boomer Lake Park v. U.S. Dep't of Transp.</i> , 4 F.3d 1543 (10th Cir. 1993)	38
<i>Ctr. for Biological Diversity v. Andre</i> , No. CV-01-1106-WJ, 2002 WL 35649725 (D.N.M. Sept. 4, 2002)	15

<i>Dep't of Transp. v. Public Citizen</i> , 541 U.S. 752 (2004).....	18
<i>Diné Citizens Against Ruining Our Env't v. Jewell</i> , No. 15-cv-0209-JB, 2015 WL 4997207 (D.N.M. Aug. 14, 2015)	5
<i>Diné Citizens Against Ruining Our Env't v. Bernhardt</i> , 923 F.3d 831 (10th Cir. 2019)	5, 6, 15, 22, 41
<i>Diné Citizens Against Ruining Our Env't v. Jewell</i> , 839 F.3d 1276 (10th Cir. 2016)	25
<i>Diné Citizens Against Ruining Our Environment v. Jewell</i> , 312 F. Supp. 3d 1031 (D.N.M. 2018)	5, 8, 10, 11
<i>Edwardsen v. U.S. Dep't of the Interior</i> , 268 F.3d 781 (9th Cir. 2001)	29
<i>Forest Guardians v. U.S. Fish & Wildlife Serv.</i> , 611 F.3d 692 (10th Cir. 2010)	13
<i>Friends of the Clearwater v. Dombeck</i> , 222 F.3d 552 (9th Cir. 2000)	15
<i>High Country Conservation Advocates v. U.S. Forest Serv.</i> , 951 F.3d 1217 (10th Cir. 2020)	14
<i>Hillsdale Envtl. Loss Prevention, Inc. v. U.S. Army Corps of Eng'rs</i> , 702 F.3d 1156 (10th Cir. 2012)	2, 25, 30, 33
<i>Idaho Sporting Cong. v. Thomas</i> , 137 F.3d 1146 (9th Cir. 1998)	12
<i>Kunaknana v. Clark</i> , 742 F.2d 1145 (9th Cir. 1984)	14
<i>Lee v. U.S. Air Force</i> , 354 F.3d 1229 (10th Cir. 2004)	3, 8
<i>Lujan v. Nat'l Wildlife Fed'n</i> , 497 U.S. 871 (1990).....	8, 10
<i>Marsh v. Or. Natural Res. Council</i> , 490 U.S. 360 (1989).....	12, 22, 35
<i>Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.</i> , 463 U.S. 29 (1983).....	8, 35
<i>N.M. Health Connections v. U.S. Dep't of Health & Human Servs.</i> , 340 F. Supp. 3d 1112 (D.N.M. 2018)	41

<i>N.M. Health Connections v. U.S. Dep’t of Health & Human Servs.</i> , 946 F.3d 1138 (10th Cir. 2019)	8
<i>Nat. Res. Def. Council, Inc. v. U.S. Dep’t of Transp.</i> , 770 F.3d 1260 (9th Cir. 2014)	25
<i>Nat’l Wildlife Fed’n v. EPA</i> , 945 F. Supp. 2d 39 (D.D.C. 2013)	10
<i>New Mexico ex rel. Richardson v. U.S. Bureau of Land Mgmt.</i> , 565 F.3d 683 (10th Cir. 2009)	9, 39
<i>Ouachita Watch League v. U.S. Forest Serv.</i> , No. 4:11CV00425 JM, 2016 WL 3511691 (E.D. Ark. Mar. 16, 2016)	11
<i>Park Cnty. Res. Council, Inc. v. USDA</i> , 817 F.2d 609 (10th Cir. 1987)	3, 11
<i>Pennaco Energy, Inc. v. U.S. Dep’t of Interior</i> , 377 F.3d 1147 (10th Cir. 2004)	4
<i>Protect Key West, Inc. v. Cheney</i> , 795 F. Supp. 1552 (S.D. Fla. 1992)	13
<i>Rio Grande Silvery Minnow v. U.S. Bureau of Reclamation</i> , 601 F.3d 1096 (10th Cir. 2010)	11
<i>Robertson v. Methow Valley Citizens Council</i> , 490 U.S. 332 (1989)	2
<i>San Juan Citizens All. v. Stiles</i> , 654 F.3d 1038 (10th Cir. 2011)	34
<i>San Juan Citizens All. v. U.S. Bureau of Land Mgmt.</i> , 326 F. Supp. 3d 1227 (D.N.M. 2018)	7, 17, 27, 29, 37
<i>Sierra Club v. Fed. Energy Regulatory Comm’n</i> , 867 F.3d 1357 (D.C. Cir. 2017)	25
<i>Sierra Club v. Fed. Highway Admin.</i> , No. 17-CV-1661-WJM-MEH, 2018 WL 1610304 (D. Colo. Apr. 3, 2018)	25, 29, 30
<i>Silverton Snowmobile Club v. U.S. Forest Serv.</i> , 433 F.3d 772 (10th Cir. 2006)	2
<i>U.S. Magnesium, LLC v. EPA</i> , 690 F.3d 1157 (10th Cir. 2012)	8
<i>Utah Envtl. Cong. v. Bosworth</i> , 443 F.3d 732 (10th Cir. 2006)	9

<i>Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.</i> , 435 U.S. 519 (1978).....	18
<i>W. Org. of Res. Councils v. U.S. Bureau of Land Mgmt.</i> , No. CV 16-21-GF-BMM, 2018 WL 1475470 (D. Mont. Mar. 26, 2018)	33, 38
<i>Wild Watershed v. Hurlocker</i> , 961 F.3d 1119 (10th Cir. 2020)	27
<i>WildEarth Guardians v. Bernhardt</i> , No. 1:19-CV-00505-RB-SCY, 2020 WL 4784821 (D.N.M. Aug. 18, 2020) .	20, 22, 25, 29, 36, 37, 38
<i>WildEarth Guardians v. Jewell</i> , 738 F.3d 298 (D.C. Cir. 2013).....	36, 37
<i>WildEarth Guardians v. Jewell</i> , No. 1:16-CV-00605-RJ, 2017 WL 3442922 (D.N.M. Feb. 16, 2017)	36
<i>WildEarth Guardians v. Office of Surface Mining and Reclamation Enf't</i> , 652 F. App'x 717 (10th Cir. 2016)	29
<i>WildEarth Guardians v. Office of Surface Mining Reclamation and Enf't</i> , 104 F. Supp. 3d 1208 (D. Colo. 2015).....	29
<i>WildEarth Guardians v. U.S. Bureau of Land Mgmt.</i> , 870 F.3d 1222 (10th Cir. 2017)	41
<i>WildEarth Guardians v. U.S. Forest Serv.</i> , 828 F. Supp. 2d 1223 (D. Colo. 2011).....	37
<i>WildEarth Guardians v. Zinke</i> , 368 F. Supp. 3d 41 (D.D.C. 2019).....	37, 38, 41, 42
<i>WildEarth Guardians v. Zinke</i> , No. CV 17-80-BLG-SPW-TJC, 2019 WL 2404860 (D. Mont. Feb. 11, 2019)	36
<i>Wilderness Workshop v. U.S. Bureau of Land Mgmt.</i> , 342 F. Supp. 3d 1145 (D. Colo. 2018).....	30, 33, 38
Statutes	
30 U.S.C. § 181	3
42 U.S.C. § 4321	2
42 U.S.C. § 4332(C)	2
43 U.S.C. § 1712(a)	3
5 U.S.C. § 704.....	10

5 U.S.C. § 706(2)(A).....	8
---------------------------	---

Rules

Fed. R. App. P. 32(a)(7)(B)	43
-----------------------------------	----

Fed. R. App. P. 32(f).....	43
----------------------------	----

Regulations

40 C.F.R. § 1502.14 (2018)	39
----------------------------------	----

40 C.F.R. § 1502.21 (2018)	7
----------------------------------	---

40 C.F.R. § 1502.22 (2018)	36
----------------------------------	----

40 C.F.R. § 1508.9(a) (2018).....	3
-----------------------------------	---

40 C.F.R. Part 1500 (2018).....	3
---------------------------------	---

43 C.F.R. § 3162.3-1(c)	3
-------------------------------	---

Other Authorities

43 Fed. Reg. 55,978 (Nov. 29, 1978).....	3
--	---

51 Fed. Reg. 15,618 (Apr. 25, 1986)	3
---	---

EXHIBIT LIST

Exhibit A: Table of the Current Statuses of the Challenged APDs

Exhibit B: Declaration of Richard Fields, Field Manager for the Bureau of Land Management's Farmington Field Office

INTRODUCTION

This case represents Plaintiffs’ second attempt to have this Court vacate applications for permit to drill (“APDs”) for 300+ oil and gas wells in northwestern New Mexico. In the first round of litigation, Plaintiffs lost on all issues in the district court but ultimately won a single issue on appeal—the Bureau of Land Management’s (“BLM”) National Environmental Policy Act (“NEPA”) analysis of cumulative water impacts—as to five environmental assessments (“EAs”) covering 21 APDs. In response to the Tenth Circuit’s decision, BLM voluntarily prepared additional NEPA analysis, in the form of an EA Addendum, for 81 EAs and 370 APDs that were not challenged in the first case (though many predate the first case and could have been challenged there). Plaintiffs’ response was to amend their petition in this lawsuit to challenge all 370 APDs and then ask this Court to ignore BLM’s additional analysis.

Plaintiffs may never be satisfied with BLM’s decision to approve APDs in the San Juan Basin, but that does not mean the agency violated NEPA. In the prior litigation, the Tenth Circuit held that BLM must consider future foreseeable oil and gas wells when assessing cumulative impacts. The agency took that instruction to heart, collected additional data, prepared multiple new studies, and issued, subject to notice and comment, an EA Addendum that supplemented the air and water analysis in the 81 challenged EAs. BLM used the EA Addendum, along with the original 81 EAs, to reassess whether any of the 370 APDs would significantly impact the human environment, and ultimately issued Findings of No Significant Impact (“FONSI”) for all of the APDs. BLM’s approach was a pragmatic and effective means of proactively addressing the Tenth Circuit’s intervening decision and fully complied with NEPA. Plaintiffs’ request that the Court simply ignore BLM’s additional analysis—and then

order the agency on remand to conduct the same analysis again—would waste taxpayer dollars on the very same “paperwork exercise” that Plaintiffs rail against. Pls.’ Opening Merits Br. 13, ECF No. 110 (“Pls.’ Br.”).

Because BLM took a hard look at air, water, health, and climate impacts in the 81 challenged EAs, as supplemented by the EA Addendum, the agency complied with NEPA and Plaintiffs’ claims should be dismissed.

BACKGROUND

I. The National Environmental Policy Act.

NEPA serves the dual purpose of informing agency decisionmakers of the environmental effects of proposed major federal actions and ensuring that relevant information is available to the public. 42 U.S.C. § 4321; *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). The statute achieves its objectives by imposing procedural rather than substantive requirements. *Hillsdale Env’tl. Loss Prevention, Inc. v. U.S. Army Corps of Eng’rs*, 702 F.3d 1156, 1166 (10th Cir. 2012). Thus, NEPA does not require an agency to follow the most environmentally sound course of action, but rather to take a “hard look” at the environmental consequences of proposed actions. *Robertson*, 490 U.S. at 350.

NEPA requires that an agency prepare an Environmental Impact Statement (“EIS”) for “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). However, agencies need not prepare a full EIS “if they initially prepare the less detailed environmental assessment (‘EA’) and, based on the EA, issue a finding of no significant impact (‘FONSI’), concluding that the proposed action will not significantly affect the environment.” *Silverton Snowmobile Club v. U.S. Forest Serv.*, 433 F.3d 772, 780 (10th Cir.

2006) (quoting *Lee v. U.S. Air Force*, 354 F.3d 1229, 1237 (10th Cir. 2004)). An EA is “a concise public document” that serves to “[b]riefly provide sufficient evidence and analysis for determining whether to prepare” an EIS or a FONSI. 40 C.F.R. § 1508.9(a) (2018).¹ An EA should include “brief discussions of the need for the proposal, of [reasonable] alternatives as required by [NEPA], [and] of the environmental impacts of the proposed action and alternatives.” *Id.* § 1508.9(b).

II. Oil and Gas Development on Federal Lands.

Congress has expressly provided for the development of oil and gas resources on public lands. 30 U.S.C. § 181; *Park Cnty. Res. Council, Inc. v. USDA*, 817 F.2d 609, 620 (10th Cir. 1987), *overruled on other grounds by Vill. of Los Ranchos de Albuquerque v. Marsh*, 956 F.2d 970, 973 (10th Cir. 1992). Generally, when BLM manages both the mineral and the surface estate, oil and gas development on federal lands involves three steps. At each stage, BLM conducts NEPA review. *See* AR003566.² First, BLM develops an area-wide resource management plan (“RMP”), specifying what areas will be open to development and the conditions placed on development for the protection of other resource values. 43 U.S.C. § 1712(a). Second, BLM may issue leases for the development of specific parcels within an area open to leasing, subject to the requirements of the RMP. *Id.* § 1712(e). Third and finally, for

¹ The Council on Environmental Quality promulgated regulations implementing NEPA in 1978, 43 Fed. Reg. 55,978 (Nov. 29, 1978), and a minor substantive amendment to those regulations in 1986, *see* 51 Fed. Reg. 15,618 (Apr. 25, 1986). More recently, the Council published a new rule, effective September 14, 2020, further revising the 1978 regulations. The claims in this case arise under the 1978 regulations, as amended in 1986. All citations to the Council’s regulations in this brief refer to those regulations as codified at 40 C.F.R. Part 1500 (2018).

² Federal Defendants use the prefix “AR” to denote citations to the administrative record.

each well that a lessee wishes to drill, the lessee must submit an APD. 43 C.F.R. § 3162.3-1(c). Before a lessee may “commenc[e] any ‘drilling operations’ or ‘surface disturbance preliminary thereto,’” BLM must conduct additional NEPA review and approve the APD. *Pennaco Energy, Inc. v. U.S. Dep’t of Interior*, 377 F.3d 1147, 1151-52 (10th Cir. 2004) (quoting 43 C.F.R. § 3162.3-1(c)). This case challenges the third step, the approval of APDs for individual wells.

III. Oil and Gas Development in the San Juan Basin.

The San Juan Basin in northwestern New Mexico is one of the nation’s largest oil and gas fields, and has been in production for over 60 years. AR002567. During that time, nearly 40,000 oil and gas wells have been drilled in the Basin, of which approximately 23,000 remain active. AR008132; AR045052.

The Mancos Shale/Gallup Sandstone formation (“Mancos Shale”) is a geologic layer within the San Juan Basin that contains oil and gas. AR008134, 8136. Although horizontal drilling has occurred in the Basin since 1980, its use increased in the mid-2000s due to innovations that allowed operators to better access the Mancos Shale. AR003560; AR003800; AR008133. Horizontal wells use more water, AR009392, but they reduce surface disturbance by allowing one well to access resources “that would normally require the drilling of several vertical wellbores.” AR045055.

Since 1949, nearly every well in the Basin has been stimulated via hydraulic fracturing. AR045680. In 2015, some operators began using slick water stimulation in the San Juan Basin. AR009393. Slick water stimulation uses more water than other types of stimulation, but can use non-potable water with higher levels of dissolved solids, including flowback fluid and produced water. AR009428-29. To date, only 20 wells have used slick water stimulation in the San Juan

Basin. AR009393.

IV. Procedural History.

A. *Diné CARE I.*

This case comes on the heels of another case brought by many of the same Plaintiffs challenging a different set of 300+ APDs targeting the Mancos Shale. In that case, Plaintiffs alleged BLM failed to take a hard look at the cumulative air and water impacts of the 3,960 wells that were then foreseeable in the Mancos Shale over the next 20 years. *Diné Citizens Against Ruining Our Environment v. Jewell* (“*Diné CARE I*”), 312 F. Supp. 3d 1031, 1054 (D.N.M. 2018). After denying their motion for a preliminary injunction, *Diné CARE I*, No. 15-cv-0209-JB, 2015 WL 4997207 (D.N.M. Aug. 14, 2015), *affirmed* by 839 F.3d 1276 (10th Cir. 2016), the court denied Plaintiffs’ claims on the merits, and Plaintiffs appealed. The Tenth Circuit affirmed all of the district court’s holdings but one. As relevant here, it held that BLM adequately analyzed the cumulative impacts of foreseeable oil and gas development on air resources, but, as to five EAs, failed to consider cumulative impacts on water resources. *Diné CARE I*, 923 F.3d 831, 854-57 (10th Cir. 2019).

B. Intervening Developments.

The 2003 Farmington RMP currently governs BLM management in the San Juan Basin. AR002553. Well before Plaintiffs filed *Diné CARE I*, BLM had already decided to prepare an EIS and a proposed amendment to the 2003 RMP “to examine changing oil and gas development patterns” in the Mancos Shale “including innovations in horizontal drilling technology and multistage hydraulic fracturing.” AR003550. As part of that process, in 2014, BLM prepared a new reasonably foreseeable development scenario (“RFDS”) to evaluate future development on

both federal and non-federal lands in the San Juan Basin over a 20 year period. *Diné CARE I*, 923 F.3d at 837. The 2014 RFDS estimated that full development of the Mancos Shale would result in 3,960 new wells. *Id.* BLM prepared an updated RFDS in 2018. AR008127. This updated RFDS revised that estimate downward and predicted “that 3,200 wells (2,300 horizontal and 900 vertical) may be reasonably assumed to be drilled” over the next 20 years. AR008139. In coordination with the Bureau of Indian Affairs, BLM issued a draft RMP Amendment and draft EIS in February 2020. AR003536. BLM provided a 210-day public comment period.³ It has not yet issued a final RMP Amendment and final EIS.

C. The Current Case.

Three months after the Tenth Circuit issued its decision in *Diné CARE I*, Plaintiffs filed this case in August 2019 challenging the APDs covered by another 32 EAs in the Mancos Shale. ECF No. 1. As they did in *Diné CARE I*, Plaintiffs immediately moved for a temporary restraining order (“TRO”) and preliminary injunction enjoining ground disturbance and development. ECF No. 5. This Court denied the request for a TRO and questioned the need for a swift decision on their request for injunctive relief. ECF No. 60.

In their response to Plaintiffs’ motion for a TRO or preliminary injunction, Defendants explained that BLM was already voluntarily and proactively taking steps to review the EAs challenged by Plaintiffs in light of the Tenth Circuit’s recent decision in *Diné CARE I*. ECF No. 44 at 1. In November 2019, BLM published a draft EA Addendum to supplement the NEPA analysis for 86 EAs. AR000001. BLM provided a 30-day public comment period and received two comment letters, including one from Plaintiffs. AR045091; AR033747. On the parties’

³ See <https://eplanning.blm.gov/eplanning-ui/project/68107/570>.

motion, the Court stayed the case pending BLM's finalization of the EA Addendum. ECF Nos. 90, 91.

BLM issued the final EA Addendum in February 2020. AR045036. The final EA Addendum supplemented a total of 81 EAs covering 370 APDs, which had originally been approved between 2014 and 2019.⁴ AR045073-77. In preparing the EA Addendum, BLM utilized recent data and information, including the 2018 RFDS's revised forecast of 3,200 new wells over the next 20 years. AR045038. BLM also incorporated additional analysis into the EA Addendum by reference, including the 2019 BLM New Mexico Water Support Document ("2019 Water Support Document"), AR009358; 2018 Air Resources Technical Report for Oil and Gas Development in New Mexico, Oklahoma, Texas, and Kansas ("2018 ARTR"), AR032864; and 2019 Cumulative BLM New Mexico Greenhouse Gas Emissions Supplemental White Paper ("2019 GHG White Paper"), AR009432. *See* AR045039; AR045050; AR045055.⁵ For all 370 APDs covered by the EA Addendum, BLM determined that the additional analysis, when combined with its earlier analysis in the 81 original EAs, did not demonstrate that the APDs would individually or collectively significantly affect the human environment or result in cumulative impacts beyond those already disclosed in the 2003 RMP. *See, e.g.*, AR045318-23. Thus, BLM issued a FONSI for each APD. *See* AR045107-667.

Shortly thereafter, Plaintiffs amended their petition to challenge all of the APDs and EAs

⁴ Although the EA Addendum says it applies to 82 EAs, it applies only to the 81 EAs listed in Appendix A. Exhibit B ¶ 5; AR045073-77.

⁵ The incorporation of materials into an EA by reference is encouraged by the 1978 NEPA regulations. 40 C.F.R. § 1502.21 (2018); *see also San Juan Citizens All. v. U.S. BLM*, 326 F. Supp. 3d 1227, 1247 (D.N.M. 2018) (holding BLM properly incorporated ARTR into EA).

covered by the final EA Addendum. ECF No. 95.

STANDARD OF REVIEW

Because NEPA does not provide a private right of action for judicial review, Plaintiffs' claims are reviewed under the Administrative Procedure Act ("APA"). 5 U.S.C. § 706(2)(A); *Lujan v. Nat'l Wildlife Fed'n*, 497 U.S. 871, 882-83 (1990). Review under the APA is confined to the administrative record before the agency at the time of the decision.⁶ *N.M. Health Connections v. U.S. Dep't of Health & Human Servs.*, 946 F.3d 1138, 1161 (10th Cir. 2019). Under the APA, a court affords an agency's decision "a presumption of regularity," *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415 (1971), *abrogated on other grounds by Califano v. Sanders*, 430 U.S. 99 (1977), and may not set aside the decision unless the court finds it to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). "[A] court is not to substitute its judgment for that of the agency," *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983), and must uphold an administrative action if the agency has "considered the relevant factors and articulated a rational connection between the facts found and the choice made," *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council*, 462 U.S. 87, 105 (1983).

⁶ Plaintiffs have improperly included substantial extra-record evidence in the affidavits attached to their opening merits brief. While the affidavits may set forth alleged harms "for the sole purpose of" establishing standing, *U.S. Magnesium, LLC v. U.S. EPA*, 690 F.3d 1157, 1165 (10th Cir. 2012), Plaintiffs have included air quality data and reports, ECF No. 110-5 ¶¶ 9-12 & p. 8-16; maps, ECF No. 110-6 at 11, 12, 13; photos, *see, e.g.*, ECF No. 110-6 at 16-22; and legal argument, *see, e.g.*, ECF No. 110-1 ¶ 12 (interpreting Tenth Circuit's decision in *Dine CARE I*). That information is not in the record and may not be considered on the merits. *Lee*, 354 F.3d at 1237 (affirming district court's strike of affidavit as extra-record evidence); *Diné CARE I*, 312 F. Supp. 3d at 1056 (refusing to consider photos in Plaintiffs' declarations as "substantive evidence" because they are "outside the administrative record").

“Deference to the agency is especially strong where the challenged decisions involve technical or scientific matters within the agency’s area of expertise.” *Utah Envtl. Cong. v. Bosworth*, 443 F.3d 732, 739 (10th Cir. 2006). Deficiencies in an EA “that are mere ‘flyspecks’ and do not defeat NEPA’s goals of informed decisionmaking and informed public comment will not lead to reversal.” *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 704 (10th Cir. 2009). The party challenging an agency’s decision bears the burden of proof. *Id.*

ARGUMENT

Of the 370 challenged APDs, this Court lacks jurisdiction over Plaintiffs’ claims against 168 which are not ripe for review and 4 which are moot. On the merits, Plaintiffs’ predetermination claim fails because BLM reconsidered its approval of each APD in light of the EA Addendum and issued a FONSI documenting its conclusions. BLM took a hard look at water, air, health, and climate impacts in the original EAs and EA Addendum and explained why the impacts were not significant under NEPA. Finally, BLM had previously analyzed the no action alternative in the 81 original EAs and had no obligation to revisit that analysis in the EA Addendum. BLM fully complied with NEPA, and Plaintiffs’ claims should be dismissed.

I. The Court Lacks Jurisdiction Over Unripe and Moot APDs.

A. Plaintiffs’ Claims Challenging Unapproved APDs Are Unripe.

This Court lacks jurisdiction over Plaintiffs’ claims challenging APDs that have not yet been approved because those claims do not challenge final agency actions. A plaintiff seeking judicial review under the APA must challenge a final agency action. 5 U.S.C. § 704; *Catron Cnty. Bd. of Comm’rs v. U.S. Fish & Wildlife Serv.*, 75 F.3d 1429, 1434 (10th Cir. 1996). An agency action is “final” if it “mark[s] the ‘consummation’ of the agency’s decisionmaking

process” and is an action “by which ‘rights or obligations have been determined’ or from which ‘legal consequences will flow.’” *Bennett v. Spear*, 520 U.S. 154, 177-78 (1997). Absent a final agency decision, “the case is not ripe for consideration by the Court.” *Nat’l Wildlife Fed’n v. EPA*, 945 F. Supp. 2d 39, 47 (D.D.C. 2013) (citing *Am. Petroleum Inst. v. EPA*, 683 F.3d 382, 386 (D.C. Cir. 2012)).

Until BLM issues a final decision either approving or denying an APD, there is no final agency action for this Court to review. Plaintiffs’ presumption that BLM will fail to comply with NEPA in its *future* APD approvals is speculation and cannot be the basis for a claim. *Lujan*, 497 U.S. at 894 (“[W]e intervene in the administration of the laws only when, and to the extent that, a specific ‘final agency action’ has an actual or immediately threatened effect.”); *Colo. Farm Bureau Fed’n v. U.S. Forest Serv.*, 220 F.3d 1171, 1174 (10th Cir. 2000) (“An agency’s intent to take action if requested does not constitute final agency action.”). Accordingly, the Court should dismiss Plaintiffs’ preemptive claims against the 168 APDs for which BLM has not yet issued a decision—that is, APDs marked as “not submitted,” “unapproved notice of staking,” “notice of staking,” “application for permit to drill,” and “unapproved application for permit to drill” in Exhibit A.⁷ See *Diné CARE I*, 312 F. Supp. 3d at 1087 (dismissing claims against APDs for which BLM had not issued a final decision).

⁷ Exhibit A is a spreadsheet providing the current status of each challenged APD, and Exhibit B is a BLM declaration that explains Exhibit A.

B. Plaintiffs' Claims Challenging Expired APDs and APDs for Permanently Abandoned Wells are Moot.

This Court lacks jurisdiction over expired APDs and APDs for wells which have been permanently abandoned because those claims are moot. A claim becomes moot when “granting a present determination of the issues offered will” no longer “have some effect in the real world.” *Rio Grande Silvery Minnow v. Bureau of Reclamation*, 601 F.3d 1096, 1110 (10th Cir. 2010) (quotation omitted). Here, Plaintiffs’ alleged harms are caused by the drilling and operation of the challenged wells. *See, e.g.*, Pls.’ Br. 3, 7-8; Am. Pet. ¶¶ 24, 44-46, 48-51, 57-58, ECF No. 95. An approved APD that has expired without the development of a well has produced no harms and cannot produce any harms in the future. Likewise, a well that has been permanently abandoned can no longer harm Plaintiffs, and any harms it may have caused are no longer redressable by the Court. *Park Cnty.*, 817 F.2d at 614-15 (finding APD challenge moot when well drilled and abandoned); *Ouachita Watch League v. U.S. Forest Serv.*, No. 4:11CV00425 JM, 2016 WL 3511691, at *3 (E.D. Ark. Mar. 16, 2016) (finding APD challenge moot once well drilled). Accordingly, Plaintiffs’ claims challenging the four APDs identified in Exhibit A as “expired,” “abandoned,”⁸ and “plugged and abandoned” are moot. *See Diné CARE I*, 312 F. Supp. 3d at 1087 (dismissing claims against APDs for permanently abandoned wells).

II. The EA Addendum Properly Supplements BLM’s NEPA Analysis for the Challenged APDs.

Having originally sued BLM claiming the agency must conduct additional NEPA

⁸ Wells marked as “abandoned” have been permanently abandoned but the surface has not yet been reclaimed. Exhibit B ¶ 8. Because Plaintiffs have not alleged harms from the reclamation process, claims against those wells are moot.

analysis for the challenged APDs consistent with the Tenth Circuit’s decision in *Diné CARE I*, see ECF No. 1 ¶ 2, Plaintiffs now ask the Court to ignore the very analysis that Plaintiffs requested. They claim that the EA Addendum must be disregarded because BLM’s analysis “was predetermined to result in a FONSI.” Pls.’ Br. 11.

Although the “subject of postdecision supplemental [EISs] is not expressly addressed in NEPA[,] preparation of such statements . . . is at times necessary to satisfy the Act’s ‘action-forcing’ purpose.” *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 370-71 (1989). The 1978 NEPA regulations specifically contemplate the supplementation of an EIS if “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts,” and “when the agency determines that the purposes of [NEPA] will be furthered by doing so.” 40 C.F.R. § 1502.9(c)(1)(ii), (2) (2018).⁹ Here, BLM properly determined that the purpose of NEPA would be furthered by “proactively” conducting additional analysis in light of the Tenth Circuit’s decision in *Diné CARE I*, which BLM recognized involved APDs for similarly-situated wells. AR045037.

BLM did not predetermine the result of its analysis. Rather, BLM explained in the EA Addendum that “[a]fter completing this additional analysis, BLM will review the 8[1] EAs and the associated 370 APDs and determine whether to affirm BLM’s original decision finding no significant impact and approving the APD or whether to reconsider that decision.” AR045037. BLM did just that. For each challenged APD, BLM reopened its decisionmaking process, reviewed its total NEPA analysis (including the 2003 RMP, original EA, EA Addendum, and

⁹ Although the regulations discuss EISs, the same standard applies to EAs. *Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1152 (9th Cir. 1998).

public comments), determined in new FONSIIs that the APD did not significantly affect the environment, and affirmed its original approval of each APD. *See, e.g.*, AR045107. Plaintiffs' request that the Court ignore the EA Addendum is thus a request that the Court ignore a key part of the administrative record.

Plaintiffs argue that BLM's analysis was necessarily predetermined because the APDs had already been approved under the original EAs and BLM did not suspend or vacate them while conducting additional analysis. But nothing in NEPA or the 1978 regulations requires an agency to suspend or vacate a decision subject to supplementation. Plaintiffs rely on *Forest Guardians v. U.S. Fish & Wildlife Service*. That case did not involve supplemental analysis for an agency action that had already been approved. But applying the standard in *Forest Guardians*—that an agency must not “irreversibly and irretrievably commit itself to a course of action” before completing NEPA analysis—demonstrates it is Plaintiffs' approach that would improperly predetermine the outcome of BLM's supplemental analysis. 611 F.3d 692, 717 (10th Cir. 2010). In the context of the challenged APDs, the status quo was an APD already approved pursuant to an EA. If BLM had vacated the APDs *before* completing its supplemental analysis, it would have committed the very error that *Forest Guardians* warned against.

Plaintiffs also cite *Protect Key West, Inc. v. Cheney*, a 1992 Southern District of Florida case in which the court held that the Navy could not bolster its EA with additional studies produced after the Navy had already reached a decision. 795 F. Supp. 1552 (S.D. Fla. 1992). The difference is that here BLM is not offering the Court post hoc studies, but rather a formal supplemental analysis proactively prepared in response to the Tenth Circuit's intervening decision in *Diné CARE I* and in compliance with NEPA's supplementation procedures, and new

FONSIIs that reflect BLM’s decision to re-affirm each APD approval.

Plaintiffs’ view also overlooks on-the-ground practicalities. An approved APD is a permit issued to a third party operator, who relies upon it to develop an oil and gas well. Although BLM retains the ability to suspend or cancel the permit in certain situations, the agency is rightfully cautious of taking action that might unnecessarily harm a third party’s reliance interests. *See* AR045091. BLM reasonably waited until it completed its additional analysis to determine whether suspension or cancellation of approved APDs was warranted.

For the same reasons, Plaintiffs’ claim that the EA Addendum was a “post hoc rationalization” rings hollow. The analysis contained in the EA Addendum is “the grounds articulated by the agency itself” to support its decision to re-affirm the APD approvals. *High Country Conservation Advocates v. U.S. Forest Serv.*, 951 F.3d 1217, 1225 (10th Cir. 2020); *see also Kunaknana v. Clark*, 742 F.2d 1145, 1149 (9th Cir. 1984) (holding modified record of decision that further explained agency’s decision not an improper post hoc rationalization). Of course any supplemental NEPA analysis completed after an agency issued a decision is necessarily “post hoc” as measured against the original decision, but that does not render the additional analysis improper—particularly where, as here, the additional analysis was done in response to an intervening Tenth Circuit decision and BLM retained the option to alter its original decision approving the APD. *Alpha, Inc. v. Leavitt*, 460 F.3d 1, 6 (D.C. Cir. 2006). Indeed, the fact that the EA Addendum applied to far more APDs than originally challenged in this case, and that Plaintiffs amended their petition to challenge those additional APDs, demonstrates that BLM’s analysis was driven not solely by this litigation but rather by its intention to ensure that all APDs targeting the Mancos Shale complied with the Tenth Circuit’s

holdings in *Diné CARE I*.

Even if BLM’s use of an EA Addendum was somehow problematic, the Court should not simply ignore it. Evidence showing “that an agency has rectified a NEPA violation after the onset of legal proceedings . . . is relevant to the question of whether relief should be granted.” *Friends of the Clearwater v. Dombeck*, 222 F.3d 552, 560 (9th Cir. 2000). Moreover, Plaintiffs have not shown any prejudice from the EA Addendum as required by the APA. *Bar MK Ranches v. Yuetter*, 994 F.2d 735, 740 (10th Cir. 1993) (“[A]n allegation of a post hoc addition [to the record] does not in itself sufficiently allege prejudice” as required by 5 U.S.C. § 706). NEPA’s goals of informed decisionmaking and public involvement were satisfied here: the EA Addendum contains the additional data and analysis that Plaintiffs themselves requested, *see* ECF No. 1 ¶¶ 85, 87, 92 & p. 28, and was subject to a 30-day notice and comment period, pursuant to which Plaintiffs submitted comments. As this Court put it in a similar case, there is “no reason in ignoring the supplemental report if it meets [relevant] requirements, only to have [BLM] do it all over again—on the sole basis that it wasn’t done earlier.” *Ctr. for Biological Diversity v. Andre*, No. CV-01-1106-WJ, 2002 WL 35649725, at *4 (D.N.M. Sept. 4, 2002). The EA Addendum was not “a purely paperwork exercise,” Pls.’ Br. 13, but BLM’s reproduction of the same analysis on remand surely would be.

III. BLM Complied With NEPA.

A. BLM Took a Hard Look at Impacts to Water Resources.

The Tenth Circuit held in *Diné CARE I* that, in five EAs for APDs in the Mancos Shale, BLM failed to consider “the cumulative water use associated with the 3,960 reasonably foreseeable horizontal Mancos Shale wells.” 923 F.3d at 856. In the EA Addendum, BLM

specifically analyzed the cumulative impacts of foreseeable development on water resources. AR045065-71. First, BLM provided context, explaining that oil and gas development uses water for drilling and completion fluids, well stimulation (including hydraulic fracturing), rig wash water, coolant for internal combustion engines, dust suppression, and equipment testing. AR045066. Hydraulic fracturing uses the majority of the water, but water use varies well-by-well depending on “many factors, including the geologic formation” targeted by the well. *Id.* Most of the water used in oil and gas development in the San Juan Basin is currently sourced from groundwater. AR045066-67.

Next, BLM calculated average water use for one well. The 2018 RFDS determined that, on average, a vertical well in the San Juan Basin uses 0.537 acre feet (“AF”) of water for drilling and completion, whereas a horizontal well uses 3.13 AF. AR045066; AR008138. However, after reviewing more recent data indicating higher water use for horizontal wells, BLM calculated an average of 4.8 AF of water per horizontal well. AR045066; AR009392-93. BLM acknowledged that slick water stimulation uses more water, but, to date, has been used in only 3% of all well completions in the San Juan Basin. AR009397; AR045070. Nevertheless, “[b]ased on water use information” for 20 slick-water stimulated wells in the Farmington Field Office area, BLM “calculated a water use average of 27 AF per lateral mile on average for slick water stimulation.” AR045066; *see also* AR009393-94, AR009397-98 (discussing slick water stimulation in the San Juan Basin).

BLM then calculated the water use of the 370 challenged APDs, of which 33 are for vertical wells and 337 are for horizontal wells. AR045050. Using current per-well water-use averages for the San Juan Basin, BLM calculated that the 370 APDs would use a total of 1,689.3

AF, which is less than 0.3% of the total water used in the San Juan Basin in 2015. AR045067-68; *see also* AR045065-66. BLM acknowledged that water use could be higher if more water-intensive stimulation methods are used, or if laterals become longer. AR045068. However, “water use estimates could be lower if produced water is reused or recycled for use in hydraulic fracturing.” *Id.*

BLM next considered the cumulative impacts of the 3,200¹⁰ wells forecast by the 2018 RFDS over the next 20 years (which includes the 370 APDs covered by the EA Addendum). BLM began by looking at total water consumption in the San Juan Basin, noting that only about 10% of water used comes from groundwater. AR045065. The vast majority of water used in the Basin is surface water used for irrigation (79%). *Id.*; AR045069. Mining, which includes oil and gas development, accounted for only 2% of the Basin’s water use in 2015. AR045066; *see also* AR009386-90 (more detailed water usage information in 2019 Water Support Document). Based on the 2018 RFDS’s estimate of 2,300 horizontal wells and 900 vertical wells, BLM determined that the 3,200 foreseeable wells would use a total of 11,615 AF of water over their lifetimes, or, per year, 0.12% of the total water used in the San Juan Basin in 2015. AR045069-70; AR009395-98. If the 2,300 horizontal wells were all slick water stimulated with

¹⁰ Plaintiffs claim BLM should have analyzed the cumulative impacts of the 3,960 wells forecast by the 2014 RFDS because that was the available forecast when most of the 81 original EAs were issued. Pls. Br. 16 n.11. This argument ignores that BLM reopened its decisionmaking process for the challenged APDs and therefore was not constrained to the data available at the time of the original decision. *Supra* 11-15; 40 C.F.R. § 1502.9(c)(1)(ii) (2018) (agency must supplement NEPA analysis to address significant new information). In suggesting that BLM should have ignored more recent data and information and developed a less accurate analysis that overestimates impacts, it is also contrary to NEPA which prizes informed decisionmaking. *See San Juan Citizens*, 326 F. Supp. 3d at 1249 (“BLM must not rely on outdated scientific tools and analyses.”).

an average 2-mile lateral, the lifetime water use for all 3,200 wells would increase to 125,000 AF, or, per year, 1.3% of the total water used in the San Juan Basin in 2015. AR045069-70; AR009397-98.

Plaintiffs make two attacks on this analysis. First, they claim BLM failed to quantify the total water that would be used by the challenged APDs if those wells were slick water stimulated. Second, they claim BLM provided no analysis of the impact of groundwater consumption on water resources. Both attacks fail.

1. BLM Accounted for Slick Water Stimulation.

Plaintiffs' first point fails for both procedural and factual reasons. First, because Plaintiffs did not raise the issue—or in fact say anything about slick water stimulation—in their comments on the draft EA Addendum, they waived the argument. *See* AR033747; *Dep't of Transp. v. Public Citizen*, 541 U.S. 752, 764 (2004) (holding party “forfeited any objection” to an EA not identified in its comments because “[p]ersons challenging an agency’s compliance with NEPA must ‘structure their participation so that it . . . alerts the agency to the [parties’] position and contentions’” (quoting *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 553 (1978))); *Amigos Bravos v. U.S. BLM*, No. 6:09-CV-00037-RB-LFG, 2011 WL 7701433, at *30-31 (D.N.M. Aug. 3, 2011) (holding plaintiffs waived right to challenge alternatives analysis by failing to raise issue in comments).

Second, even if the Court considers Plaintiffs' contentions about slick water stimulation, they are premised on an inaccurate reading of the EA Addendum. BLM calculated the direct impact of the 370 APDs based on the average water use for a horizontal well in the San Juan Basin *regardless of completion and stimulation technologies*. AR045068. BLM was

concerned that the 2018 RFDS's estimate of water use for a horizontal well (3.13 AF) was too low and therefore used 2018 FracFocus data to determine "the most accurate current estimate of water use per horizontal well in the New Mexico portion of the San Juan Basin," 4.8 AF.

AR009411. Because this number is an average across *all* horizontal wells, it includes slick water stimulated wells. AR009426. The number is lower than the 27 AF per lateral mile that BLM calculated as the average water use for a single slick water well because, at the moment, 97% of wells in the Basin are not slick water stimulated. "To date" only "20 wells have been drilled using long laterals with slick-water stimulation within the Farmington [Field Office]," AR009393, and slick water completions make up only 3% of all well completions in the San Juan Basin. AR009397. Therefore, BLM's calculations accurately reflect the current average water use for a horizontal well in the San Juan Basin.

Because slick water stimulation may be used more frequently in the future, BLM also calculated the impact on water assuming that all of the horizontal wells predicted over the next 20 years would be slick water stimulated. BLM determined that the development of 2,300 slick water stimulated horizontal wells and 900 vertical wells would use a total of 124,998 AF of water over the next 20 years, which, per year, is only 1.3% of the total water used in the San Juan Basin in 2015. AR045069-70. Moreover, water for slick water stimulation "may come from non-traditional water sources, including the non-potable groundwater within the Entrada formation, recycled flowback water, and produced water," which are water sources "that generally cannot be used for other water uses" such as agriculture. AR045070. Thus, the EA Addendum shows even the maximum water consumption over the next 20 years resulting from the 3,200 foreseeable wells would represent a tiny percentage compared to other water uses in

the Basin, and would not significantly impact water used for other purposes like irrigation and drinking water. AR045070; AR045111.

As this Court recently held in the context of BLM oil and gas leases in the Pecos District, BLM's calculations of the range of possible water usage based on the RFDS's predicted total number of wells, and the comparison of those numbers to other uses, satisfies NEPA.

WildEarth Guardians v. Bernhardt, No. 1:19-CV-00505-RB-SCY, 2020 WL 4784821, at *13-14 (D.N.M. Aug. 18, 2020); *see also Citizens for a Healthy Cmty. v. U.S. BLM*, 377 F. Supp. 3d 1223, 1245 (D. Colo. 2019) (holding agency estimates of water quantities needed for oil and gas wells satisfied NEPA and finding plaintiffs' arguments not sufficiently "compelling to overcome the deference paid to the agencies").

2. BLM Considered Impacts to Groundwater.

As to Plaintiffs' second argument, BLM addressed the impact of foreseeable water use on groundwater sources to the extent possible. BLM explained that operators acquire water by leasing or buying water or water rights from the State, private providers, and reclaimed water suppliers. AR009399. The agency identified the aquifers that provide groundwater in the San Juan Basin, as well as their sources of recharge. AR009398-9401, 9417-18. Moreover, in the original EAs for each APD, BLM explained that development of wells in the Mancos Shale "is unlikely to affect overlying drinking water aquifers." AR082677. "Based on the confining layers and the depth at which impacts are expected to occur, no impacts to surface water or freshwater-bearing groundwater aquifers are expected to occur from hydraulic fracturing of the proposed wells." AR075629; *see also* AR045040 (Wellbores "would pass through usable groundwater aquifers" but proper cementing and casing should avoid contamination).

To the extent Plaintiffs want a calculation of the depletion of each aquifer due to cumulative oil and gas development, such an analysis would not be particularly helpful given that oil and gas development represents less than 2% of water use in the San Juan Basin. AR045066. Nor is it currently possible. As the 2019 Water Support Document explains, BLM cannot predict the specific sources of water that will be used for the development of the 3,200 forecast wells. AR009399; AR009416 (“[S]ources of water for lease development are also not always known at the APD stage.”). “In addition to utilizing surface or groundwater, operators may also bring water to a well site via truck from any number of sources,” including sources outside of the San Juan Basin.¹¹ AR009399. Future wells, particularly those that are slick water stimulated, may use recycled and produced water rather than groundwater and thus may have a limited impact on aquifers. AR045070-71; AR009400. To the extent they use groundwater, that groundwater is likely to come from the Entrada formation, which is non-potable and not used for other purposes. *Id.*; AR045067. Even putting aside BLM’s inability to predict sources of water, hydrology is complicated and “various hydrologic inputs,”—such as precipitation, irrigation return flow, seepage from rivers and streams—“are occurring alongside” various outputs—such as “consumptive water use” and “evapotranspiration and discharge from springs and seeps.” AR009413.

This is not to say that BLM is not trying to develop more precise information on water impacts. BLM is currently collaborating with Sandia National Laboratory on long-term studies regarding water impacts. AR009399; AR009401. But science is a work in constant progress

¹¹ See, e.g., AR082527-28 (water for wells covered by EA 2018-0103 will be trucked in from the Blanco Trading Post well and from multiple water recycling facilities; company “may also utilize produced water gathered from their existing wells within the Mancos Gallup area”).

and BLM need not forestall all decisionmaking while it waits for the latest information. *Marsh*, 490 U.S. at 373; *see also WildEarth Guardians*, 2020 WL 4784821, at *14-15 (deferring to BLM’s analysis and conclusions regarding impacts to aquifers).

In sum, in its original EAs and EA Addendum, BLM took a hard look at the impact of foreseeable oil and gas development on water resources, and explained its methodological choices. NEPA requires nothing further.

B. BLM Took a Hard Look at Air Quality and Health Impacts.

In *Diné CARE I*, the Tenth Circuit held these same Plaintiffs failed to “carr[y] their burden of demonstrating that the BLM acted arbitrarily or capriciously” in its analysis of air quality impacts. 923 F.3d at 855-56. Nevertheless, BLM proactively included additional air analysis in the EA Addendum. Plaintiffs now seek a second bite at the apple, challenging the agency’s analysis of air quality in the context of a different set of 300+ APDs, many of which were contemporaneous with the APDs challenged in *Diné CARE I*.

BLM’s analysis of air quality for the challenged APDs is significantly more thorough than that upheld by the Tenth Circuit because it includes the EA Addendum, which incorporates the 2018 ARTR. AR045050; AR032864. BLM began by outlining the pollutants produced by oil and gas development, including nitrogen oxide (NO_x) and volatile organic compounds (VOCs) which combine to form ozone (O₃), and particulate matter (PM) 2.5 and PM 10, and discussed how they can harm human health. AR045043-46; AR032871-80. It then explained the tools that BLM uses to assess the severity and impact of emissions, including the National Ambient Air Quality Standards (“NAAQS”), which are defined by the EPA for criteria pollutants and set a level that should not be exceeded for the purpose of protecting human health and the

environment. AR045043-47; AR032868-71. BLM also discussed the Air Quality Index (“AQI”) which translates air quality data into a daily level that corresponds to health concerns, AR045048-49, and the National Air Toxics Assessment (“NATA”) which models ambient exposures to hazardous air pollutants and estimates exposure risks. AR045049-50; AR032879. The AQI data for the San Juan Basin region between 2006 and 2018 does not show a “trend of degrading AQI values over time,” AR045049, and the 2014 NATA “shows that cancer, neurological risks, and respiratory risks in the analysis area (San Juan, Sandoval, Rio Arriba, and McKinley Counties) are generally lower than statewide and national levels, as well as those for Bernalillo County, where urban sources are concentrated in the Albuquerque area.” AR045050.

Turning to the 370 APDs at issue in this case, BLM calculated the total emissions of each pollutant that those wells would produce, and found that all 370 wells taken together would cause an increase of between 0.46% and 3.16% in annual emissions in the San Juan Basin region depending on the pollutant. AR045051. These calculations are the maximum possible annual emissions from the 370 APDs because they assume all of the wells are drilled and produced at the same time—“a scenario that is not viewed by the BLM as likely or possible” given that some of the wells have already been drilled and some may never be drilled. AR045050; *see also* Exhibit A. The additional emissions “would not be expected to result in any exceedances of the NAAQS or NMAAQs for any criteria pollutants in the analysis area, even assuming development of all wells in one year.” *Id.* Moreover, the additional emissions would not be expected to increase the number of days with an unhealthy AQI. *Id.*

BLM then calculated the cumulative emissions of the 3,200 predicted Mancos wells over the next 20 years when combined with past, present, and other reasonably foreseeable future

actions. The San Juan Basin currently has 23,034 active oil and gas wells, and the primary generators of emissions in the region are two coal-fired power plants. AR045047; AR045052. Thus, the 3,200 additional wells are expected to increase emissions in the area by only 0.2% to 1.41% per year depending on the pollutant. AR045054. These numbers are sufficiently low that they “would not be expected to result in any exceedances of the NAAQS or NMAAQs for any criteria pollutants” or increase the number of days with an unhealthy AQI. *Id.* Moreover, the additional emissions from the 3,200 wells are offset by recent reductions in emissions at the two coal-fired power plants, and the anticipated 2022 closure of one of the plants. *Id.*

Plaintiffs attack this thorough analysis in three ways, arguing that BLM (1) quantified emissions but did not analyze the effects of those emissions; (2) failed to fully disclose total emissions; and (3) failed to consider current air quality in the San Juan Basin. Each of these allegations ignores the record and mischaracterizes BLM’s analysis.

1. BLM Used Accepted Methodologies to Analyze Health and Air Quality Impacts.

First, Plaintiffs claim that BLM merely quantified emissions and failed to consider impacts to health. But Plaintiffs ignore that the NAAQS and AQI standards are an accepted means of measuring the impact of air pollutants on human health. *See* AR045043 (The Clean Air Act requires EPA to set NAAQS “for pollutants considered harmful to public health and the environment.”); AR045102-3 (The AQI “translate[s] daily air quality into a tiered, color coded system that helps people understand how clean the outdoor air is, who may be affected if pollutant levels are higher than desired, and when they may want to take measures to protect their own health.”). Numerous courts have held that measuring anticipated emissions against the NAAQS satisfies an agency’s obligation under NEPA to take a hard look at air quality and

human health. *See, e.g., Hillsdale*, 702 F.3d at 1175; *Diné CARE I*, 839 F.3d 1276 at 1283; *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1370 n.7 (D.C. Cir. 2017); *Citizens for a Healthy Cmty.*, 377 F. Supp. 3d at 1243-44; *WildEarth Guardians*, 2020 WL 4784821, at *13; *Amigos Bravos*, 2011 WL 7701433, at *12; *see also Sierra Club v. Fed. Highway Admin.*, No. 17-CV-1661-WJM-MEH, 2018 WL 1610304, at *7 (D. Colo. Apr. 3, 2018) (“[T]he case law is nearly unanimous that federal agencies may rely on NAAQS compliance to conclude that human health will not be seriously affected by a transportation project.”).¹² Here, BLM properly explained that neither the 370 challenged wells alone, nor the 3,200 foreseeable wells, would result in any exceedances of the NAAQS for any criteria pollutants, or increase the number of unhealthy air days under the AQI. AR045051-52, 45054.

2. BLM Accounted for the Total Lifetime Emissions of the Wells.

Second, Plaintiffs take issue with BLM’s characterization of exposure to pollutants as a “temporary nuisance for those living near the oil and gas development” because most emissions would occur during the construction, completion, and reclamation phases of development and would thus result in “short-term local area increases,” “lasting an average of 30 days for each of the three phases over the life of a well.” AR045052. Their frustration here seems to flow more from BLM’s use of the term “temporary nuisance” than from any failures under NEPA.

Plaintiffs first claim that BLM disclosed only annual emissions rather than emissions over the full life of the wells. In fact, Tables 8 and 10 of the EA Addendum show emissions

¹² Tellingly, Plaintiffs rely entirely on Ninth Circuit case law to support their arguments in this section, Pls.’ Br. 20-21, and they cite it disproportionately throughout the rest of their brief. None of the cases cited by Plaintiffs involve emissions from oil and gas development or the use of NAAQS. *Cf. Nat. Res. Def. Council, Inc. v. U.S. Dep’t of Transp.*, 770 F.3d 1260, 1271 (9th Cir. 2014) (upholding agency’s NEPA analysis which compared project emissions to NAAQS).

estimates for the entire lifecycle of the 370 wells, including “construction, operations, maintenance, and reclamation.” AR045051; AR04094 (explaining that Table 8 “discloses the impacts from the wells over their assumed 20-year lifespan, consistent with the 2018 RFD”); AR045095 (“[T]he total impacts for the lifespan of the wells is projected through the impacts included in Chapter 3 for all resources analyzed.”). The ARTR reinforces this point. The emissions calculations in the EA Addendum were made using the calculators in the ARTR which account for the lifecycle requirements of wells in the San Juan Basin and include values for “construction, completion, interim reclamation, annual operation, and final reclamation.” AR032897; AR045050. They also include construction of a “frac pond” because nearly all wells in the Basin are hydraulically fractured, as well as emissions from ancillary activities like workovers, road maintenance, and road traffic. AR032898. Thus, while emissions are “most acute” during the construction, completion and reclamation phases, BLM’s calculations still account for emissions corresponding to the production phase. AR045051; AR033463, AR033485 (emissions data for ARTR calculators).

Tables 8 and 10 express the total emissions during all phases of development as annual emissions consistent with the widely accepted practice of providing air pollutant data in the form of annual concentrations or tons per year. *See* AR032870 (EPA reports air pollution data as “annual average concentrations” and “tons per year.”). Expressing emissions as annual totals allows for comparison with EPA and state metrics. It also accounts for the fact that BLM cannot predict the lifespan of a given well. “Well life can vary from a few years to many decades depending on the reservoir and the year it was drilled.” AR032896. BLM’s reasonable methodological choice of how to present data is owed deference—and a reader can

simply multiply BLM’s annual estimates by 20 to determine total emissions over the potential lifespan of the wells. *See Wild Watershed v. Hurlocker*, 961 F.3d 1119, 1132 (10th Cir. 2020) (deferring to agency’s technical and scientific decisions; noting issue is not whether the agency’s choice is the “best approach” but rather whether it was a “clear error”).

Plaintiffs also claim that BLM “downplays” the significance of the “cumulative impacts from multiple wells concentrated in a nearby area” by comparing well emissions to total emissions in the San Juan Basin. Pls.’ Br. 23. But by calculating the emissions of the 370 challenged wells and the 3,200 foreseeable wells, all of which would be developed in the San Juan Basin, and comparing those emissions to the emissions from other past, present, and future projects in the same area, BLM specifically accounted for the concentrated nature of the development. The fact that these numbers are relatively low compared to total emissions in the San Juan Basin—which includes two coal-fired power plants and over 23,000 active wells—is not a means of “downplay[ing]” their significance but rather properly contextualizing their relative impact to air quality in the Basin. *See Amigos Bravos*, 2011 WL 7701433, at *12 (upholding BLM’s analysis of air quality in light of air quality of entire San Juan Basin); *San Juan Citizens*, 326 F. Supp. 3d at 1252 (upholding air quality analysis comparing project emissions to region-wide emissions). The agency’s analysis is not dismissive of potential health risks but rather has simply identified no significant risks when measuring the foreseeable lifecycle emissions of the wells at issue in this case and all 3,200 foreseeable wells against the accepted standards for assessing health risks.

3. BLM Considered Current Air Quality in the San Juan Basin.

Third, Plaintiffs claim that even if ozone levels in the San Juan Basin region have not

exceeded the NAAQS, BLM should have accounted for the fact that they are still “dangerously high.” Pls.’ Br. 24. Plaintiffs rely on the American Lung Association’s “F” rating for ozone pollution in San Juan County between 2012 and 2014. AR044943. They omit that the same study ranked San Juan County as one of the “cleanest counties” for particle pollution, AR044834, AR044851, and gave Sandoval County, another county in the San Juan Basin region, an “A” rating for ozone. AR044943. But even putting those nuances aside, this argument is merely another attack on BLM’s choice to use the NAAQS and AQI to assess air quality and the impacts of air pollution on human health. *See supra* 24-25.

BLM recognized in the EA Addendum that ozone “is a criteria pollutant that is of most concern for the analysis area.” AR045044; *see also* AR032871-73, 32888-89 (ARTR discussion of ozone). It acknowledged that monitoring in the analysis area “indicates that levels of O₃ have come close to, but have not yet exceeded, the NAAQS in San Juan County.” AR045046. Despite those concerns, however, the NO_x and VOC emissions from the APDs challenged in this case, and from the 3,200 foreseeable Mancos wells, “are anticipated to be too small in quantity to result in exceedances of O₃ in the analysis area.” AR045052, 45054. Notably, “ozone concentrations in Farmington, NM decreased 6% from 2000 to 2012.” AR032872 (also citing 2014 study showing that “VOC emissions from biogenic sources”—that, is living organisms—“account for 82% of total VOCs in” New Mexico). BLM also noted that New Mexico “has begun developing an Ozone Attainment Initiative, which, if implemented on schedule, will have a plan in place by summer 2020” and “will set standards for emissions sources” to control NO_x and VOC emissions. AR045046. As explained above, BLM’s reliance on the NAAQS to assess the impacts of ozone from foreseeable development is

consistent with Tenth Circuit case law.¹³ *Supra* 24-25.

Moreover, this Court recently rejected nearly identical arguments challenging BLM's similar approach to analyzing ozone in oil and gas lease EAs in the Pecos District. *WildEarth Guardians*, 2020 WL 4784821, at *11-13. And in *Amigos Bravos*, a case focused on ozone emissions from oil and gas development in the San Juan Basin, this Court upheld BLM's air analysis, noting that BLM recognized that "ozone levels in the San Juan Basin were again close to exceeding the NAAQS" but took a hard look at all relevant factors. 2011 WL 7701433, at *12-14; *see also San Juan Citizens*, 326 F. Supp. 3d at 1251 (upholding air analysis where BLM concluded that "[t]he potential amounts of ozone precursor emissions of NO_x and VOCs from the proposed lease sale are not expected to impact the current design value for ozone in San Juan County"). The same conclusion applies here. Plaintiffs' attacks on BLM's use of the NAAQS

¹³ Plaintiffs cite *WildEarth Guardians v. OSMRE*, 104 F. Supp. 3d 1208 (D. Colo. 2015), for the proposition that BLM cannot rely on the NAAQS in assessing the health impacts of air pollution. That case has been vacated by the Tenth Circuit, 652 F. App'x 717 (10th Cir. 2016), and is inapposite because it addressed OSMRE's authority to consider air quality under NEPA, not whether an agency could utilize the NAAQS in substantively assessing air impacts under NEPA. 104 F. Supp. 3d at 1227-28. Even if it could be read to question the use of NAAQS, it is contrary to the clear weight of authority in the Tenth Circuit. *See supra* 24-25; *Sierra Club*, 2018 WL 1610304, at *7-8 (noting *WildEarth Guardians v. OSMRE* is the "only potential exception" to the "nearly unanimous" rule that "federal agencies may rely on NAAQS compliance" to assess health impacts and refusing to give decision any weight because that court "was not presented, and did not decide" "whether agencies can rely on NAAQS to satisfy their NEPA obligation to evaluate air pollution's impact on human health").

Plaintiffs also omit key language from *Edwardsen v. U.S. Department of the Interior*. Pls.' Br. 25. In full, the quotation states: "the fact that the area will remain in compliance with the NAAQS is not particularly meaningful, *because the ambient air quality in the area presently exceeds NAAQS standards.*" 268 F.3d 781, 789 (9th Cir. 2001) (italicized language omitted from Plaintiffs' brief). In contrast, here, ozone levels have not exceeded the NAAQS. Plaintiffs also omit the Ninth Circuit's conclusion that it "was not unreasonable for the [agency] at this stage to rely upon compliance with the NAAQS" in its NEPA analysis. *Id.*

and other standards is “basically a methodological question—evaluating air pollution effects through NAAQS conformity modeling or through some other way.” *Sierra Club*, 2018 WL 1610304, at *8. “Courts are not in a position to decide the propriety of competing methodologies,” particularly “when the dispute involves a technical judgment within the agency’s area of expertise.” *Id.* (quoting *Hillsdale*, 702 F.3d at 1177-78).

In short, BLM voluntarily took a *second* hard look at air quality and associated health impacts for these APDs with substantial additional data and analysis. Its thorough approach and choice of methodologies are owed deference and should be upheld. *See Wilderness Workshop v. U.S. BLM*, 342 F. Supp. 3d 1145, 1164 (D. Colo. 2018) (upholding analysis of health impacts of oil and gas development where agency discussed “the regulatory structure for air quality; the current conditions, including ambient air pollution concentrations, particulate matter, ozone, hazardous air pollutants, and visibility; and characterization of air quality”).

C. BLM Took a Hard Look at GHG Emissions and Climate Change.

The record demonstrates that BLM took a hard look at GHG emissions and climate change. In the EA Addendum and the 2019 GHG White Paper incorporated by reference, BLM began by explaining the nature of climate change and the greenhouse effect. AR045055-56; AR009436-42. “The two primary GHGs associated with the oil and gas industry are CO₂ and CH₄ [methane].” AR045056. In 2014, the extraction and combustion of fossil fuels produced on all U.S. federal lands generated 1,332 million metric tons (MMT) of carbon dioxide equivalent (CO₂e), which represents 19.4% of national emissions and 2.8% of global emissions. AR045056; AR009442-43. Extraction and combustion of fossil fuels produced on federal lands

in New Mexico generated 91.63 MMT of CO₂e in 2014, which is 1.33% of national emissions and 0.19% of global emissions. AR045057; AR009446. Because U.S. federal lands also sequester carbon, in 2014 they offset “approximately 15% of CO₂ emissions resulting from the extraction of fossil fuels on federal lands and their end-use combustion.” AR045056; AR009443.

Next, BLM calculated the total direct emissions from the 370 wells at issue in this case. The wells would emit GHGs both during the construction and operation phases of development, for a total of 498,182.8 metric tons (MT) CO₂e. AR045057-59. This is the highest possible estimate of direct GHG emissions because it assumes all 370 wells are gas wells in the construction phase and would therefore require additional venting, and all 370 wells are oil wells in the operations phase and would therefore require additional maintenance, workovers, storage, and transportation. AR045057-58. The total construction and operations emissions for all 370 wells would result in “an increase of 0.00076% in the total annual U.S. GHG emissions and 7.32% of annual New Mexico oil and gas emissions.” AR045059.

BLM then looked at downstream GHG emissions which result from the use and combustion of produced oil and gas. If all 370 wells produce both oil and gas over the 20-year time span of the RFDS, they would result in an additional 31,487,075.8 MT CO₂e of downstream GHG emissions over their lifetimes, assuming that the produced oil and gas is combusted for energy production. AR045061.

Finally, BLM analyzed cumulative impacts. Development of the 3,200 foreseeable wells would produce an additional 398.4 MMT of CO₂e over 20 years. AR045064; AR009455. In the 2019 GHG White Paper, BLM calculated future U.S., federal, non-federal, New Mexico,

and BLM New Mexico fossil fuel emissions in 2020 and 2030 assuming a high growth scenario. AR009451. The predicted 1,980 wells on federal lands would represent 0.93% to 1.67% of BLM's annual 2014 fossil fuel end-use combustion, and 0.97% to 1.74% of BLM's annual 2030 estimated GHG emissions. AR009454.

Plaintiffs attack BLM's GHG and climate change analysis on four fronts, all of which seek to displace the technical determinations of the expert agency.

1. BLM Explained Its Methodology for Calculating GHG Emissions, Including Its Choice of Global Warming Potential.

First, Plaintiffs accuse BLM of failing “to define how it quantified GHG emissions” and failing to account for methane’s 20-year global warming potential (“GWP”). Pls.’ Br. 29-30. Plaintiffs’ first point is unexplained and unelaborated in their brief and easily rebutted by BLM’s thorough explanation of its calculations, recounted above. It is not clear what more Plaintiffs expect.

As to their second point, Plaintiffs fault BLM for using a 100-year GWP for methane instead of a shorter 20-year GWP. Pls.’ Br. 28. GWP is a metric for “the relative and absolute contributions” of different GHGs to climate change by comparing “the heat absorbing ability of a certain mass of a gas relative to the same mass of carbon dioxide.” AR032918; AR009441-42. In the 2018 ARTR and 2019 GHG White Paper, BLM disclosed both methane’s 100 and 20-year GWPs: according to the Intergovernmental Panel on Climate Change (“IPCC”) Fourth Assessment, methane “has a GWP of 56 over a 20-year time horizon and a GWP of 21 over a 100-year time horizon,” meaning methane “is 56- and 21-times more potent than CO₂ over these time periods.” *Id.* BLM chose to use the 100-year time horizon in the EA Addendum “since most of the climate change impacts derived from climate models are expressed toward the end of

the century,” as GHGs accumulate over time. AR045094. BLM also used the 100-year horizon in the EA Addendum to be consistent with “official GHG emission estimates for the United States” which “are reported based on the GWP values given in the Fourth Assessment Report (AR4) of the IPCC, which also uses a 100-year GWP.” *Id.*; *see also* AR045056, AR045060, AR045094 (discussion of GWPs in EA Addendum).¹⁴

Because BLM disclosed its options and explained its choice, Plaintiffs’ attack on BLM’s use of the 100-year GWP is another improper attack on the agency’s methodology. *Hillsdale*, 702 F.3d at 1178 (“An agency has discretion to choose a methodology, so long as it explains why it is reliable.”). At least one court in this Circuit has already rejected this same attempt to second-guess BLM’s chosen time horizon for GWPs. *Wilderness Workshop*, 342 F. Supp. 3d at 1160-61.¹⁵

2. BLM Quantified Emissions Over the Life of the Challenged Wells.

Second, Plaintiffs claim that BLM failed to quantify direct emissions over the lifespan of the challenged wells by failing to account for the fact that while construction emissions occur only once when the well is constructed, operations emissions continue to occur over the life of the well. Pls.’ Br. 29. Because BLM cannot predict the lifespan of a given well, the agency

¹⁴ The IPCC updated its GWPs in its Fifth Assessment, but BLM used the GWPs from the Fourth Assessment for the EA Addendum to be consistent with official U.S. GHG emission estimates. AR009441; AR045094.

¹⁵ Plaintiffs cite another Ninth Circuit case to support their GWP argument. There, the court held that BLM did not explain its decision to use the 100-year time horizon or respond to comments critical of that choice. *W. Org. of Res. Councils v. U.S. BLM*, No. CV 16-21-GF-BMM, 2018 WL 1475470, at *15-16 (D. Mont. Mar. 26, 2018). In contrast, here BLM disclosed both the 100 and 20 year GWPs, responded to comments about GWPs, and explained why it chose to use the 100-year time horizon.

has to rely on approximations and assumptions to estimate emissions. AR032896 (“It is not possible to estimate the lifespan of an individual well, nor is the calculator able to incorporate the decline curve into results, so we have computed one-time (construction, completion, workover and reclamation) emissions and annual (operations and maintenance) emissions.”). Here, BLM chose to estimate lifetime operations emissions by assuming that all 370 wells are oil wells, all are in operation at the same time, and all operations impacts occur in one year. AR045058; AR045061; AR045093-94. While this approach may underestimate emissions to the extent some wells may have longer lifespans, the vast majority of direct emissions occur during the first year (construction and completion). *Id.* BLM also purposefully overestimated emissions in other ways, for example by assuming all 370 wells are oil wells with higher operations emissions and all wells will be constructed and operated at the same time. BLM’s approach is also consistent with the fact that future wells are likely to have shorter lifespans due to the fact that the San Juan Basin has been heavily drilled for decades and “[s]ubsequent infill drilling will encounter reduced pressure reservoirs.” AR032896.

For purposes of calculating downstream emissions from the combustion of produced oil and gas, BLM assumed a 20-year lifespan of the wells consistent with the 20-year horizon of the RFDS. AR045061. Because downstream combustion emissions dwarf operations emissions, the 20-year lifespan for downstream emissions—which may well be an overestimate for many wells—ensures that BLM’s estimates are not shortchanging foreseeable emissions.

BLM’s technical and methodological choices about how to estimate emissions in light of future uncertainties are owed deference. *San Juan Citizens All. v. Stiles*, 654 F.3d 1038, 1057 (10th Cir. 2011) (“[A]n agency must have discretion to rely on the reasonable opinions of its

own qualified experts even if, as an original matter, a court might find contrary views more persuasive.” (quoting *Marsh*, 490 U.S. at 378)).

3. *BLM Assessed the Significance of GHG Emissions.*

Third, Plaintiffs claim that BLM failed to discuss “the significance and severity” of GHG emissions. Pls.’ Br. 30-34. Confusingly, Plaintiffs are upset by BLM’s “mountain of paper, charts, and datasets,” *id.* at 31—even though that data and analysis is precisely what Plaintiffs have sought in their numerous lawsuits and, more importantly, what NEPA requires. The EA Addendum discusses the impacts of GHG emissions and climate change at length. BLM explained that climate change is contributing to warming temperatures and rising sea levels, and that “[a]dditional near-term warming is inevitable due to the thermal inertia of the oceans and ongoing GHG emissions.” AR045056. BLM acknowledged that New Mexico is expected to see an increase in average temperatures by 4 to 6 degrees by the end of the 21st Century, and the southwest “will see a 10% to 20% decline in precipitation, primarily in winter and spring, with more precipitation falling as rain.” AR045056. The Upper Rio Grande Basin is expected to experience decreased water availability, decreased summertime stream and river flows, and increased frequency, intensity, and duration of droughts and floods. *Id.*; *see also* AR045060, AR009439-40 (further discussing climate change impacts).

However, construction and operation of the 370 wells at issue in this case will increase U.S. annual emissions by only 0.00076%. AR045059. Total lifetime emissions, including downstream emissions, from the 370 wells would represent 0.48% of total annual U.S. emissions

from all sources in 2016. AR045059, AR045061.¹⁶ Annual cumulative emissions from the 3,200 foreseeable wells would account for 0.23% to 0.44% of total U.S. emissions from all sources in 2016. AR045059, AR045064.¹⁷ Thus, BLM reasonably concluded that “the foreseeable Greenhouse Gas (GHG) emissions of the original Proposed Action, when compared to the reasonably foreseeable past, present, and future potential emissions of the state and nation as well as the foreseeable downstream GHG emissions, will incrementally contribute to global GHG emissions with de minimis impacts to cumulative GHG emissions.” AR045102.

Numerous courts, including this one, have upheld this same approach of contextualizing projected GHG emissions at regional, state, and national scales to conclude that the overall impact of the project on climate change is minimal. *WildEarth Guardians*, 2020 WL 4784821, at *9-10; *WildEarth Guardians v. Jewell*, No. 1:16-CV-00605-RJ, 2017 WL 3442922, at *12 (D.N.M. Feb. 16, 2017); *WildEarth Guardians v. Zinke*, No. CV 17-80-BLG-SPW-TJC, 2019 WL 2404860, at *10 (D. Mont. Feb. 11, 2019); *WildEarth Guardians v. Jewell*, 738 F.3d 298, 310 (D.C. Cir. 2013); *Citizens for a Healthy Cmty.*, 377 F. Supp. 3d at 1238-39; *Barnes v. U.S. Dep't of Transp.*, 655 F.3d 1124, 1139 (9th Cir. 2011).

Notwithstanding this robust analysis, Plaintiffs contend that BLM should have done more to “connect the dots” to “site-specific” climate change impacts. Pls.’ Br. 31-32. But as BLM explained, consistent with its obligation under 40 C.F.R. § 1502.22 (2018) to acknowledge when “information is lacking,” “[t]he incremental contribution to global GHGs from a proposed land

¹⁶ Calculated by dividing the total life emissions of the 370 wells (31,487,075.8 MT CO₂e) by total U.S. emissions from all sources in 2016 (6,511 MMT CO₂e).

¹⁷ Calculated by dividing the annual cumulative emissions (ranging from 15.3 MMT to 28.5 MMT per year) by the total U.S. emissions from all sources in 2016 (6,511 MMT CO₂e).

management action cannot be accurately translated into effects on climate change globally or in the area of any site-specific action.” AR045055. “Currently, global climate models are unable to forecast local or regional effects on resources.” *Id.*; *see also* AR045104 (“Due to the current available science regarding the anticipated climate related impacts associated with GHGs and the relative unknown nature of how these impacts can impact localized communities, the BLM cannot make a reasoned, meaningful analysis that includes scientific conclusions regarding impacts to human health, based on what is known regarding the current exposures.”); AR032916, 32892-93, 32896 (discussing limitations and uncertainties in predicting climate impacts). Recognizing the limitations of climate models, courts have upheld similar NEPA analyses in other cases. *See WildEarth Guardians*, 738 F.3d at 309; *WildEarth Guardians v. U.S. Forest Serv.*, 828 F. Supp. 2d 1223, 1240 (D. Colo. 2011); *Citizens for a Healthy Cmty.*, 377 F. Supp. 3d at 1239; *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 79 (D.D.C. 2019).

San Juan Citizens Alliance does not dictate otherwise. The court in that case focused on “the failure of BLM to quantify and analyze the impacts of downstream greenhouse gas emissions,” which Plaintiffs do not challenge here. 326 F. Supp. 3d at 1242-44, 1248-50 & n.8. The court held BLM’s conclusion that GHGs produced by the challenged oil and gas leases were “very small” and “would not produce climate change impacts” was insufficient “without further explanation.” *Id.* at 1248. It is not clear if that holding applied outside the context of downstream emissions, *see WildEarth Guardians*, 2020 WL 4784821, at *9, but, even if it did, BLM heeded it and in the EA Addendum and 2019 GHG White Paper provided substantial additional information demonstrating that the emissions of the 370 challenged APDs and 3,200 foreseeable wells are so dwarfed by other emissions regionally, nationally, and globally that their

contribution to climate change would be “de minimis.” AR045062-64; AR045102; *see also WildEarth Guardians*, 2020 WL 4784821, at *9 (refusing to find BLM analysis of cumulative climate change impacts in violation of NEPA based on *San Juan Citizens Alliance*).

4. BLM Had No Obligation to Use a Carbon Budget to Assess GHG Emissions.

Fourth, Plaintiffs contend BLM should have used a carbon budget to assess the impact of GHG emissions.¹⁸ Pls.’ 34-36. “A carbon budget caps the amount of greenhouse gases that may be emitted worldwide to stay below a certain warming threshold.” *W. Org. of Res. Councils*, 2018 WL 1475470, at *14. As BLM explained in the EA Addendum, “BLM is not required to use any specific protocols or methodologies, such as the social cost of carbon or global carbon budget, to determine the impact of the APDs on climate change.” AR045095-96, AR045097. Every case that has considered this issue has agreed, finding that agencies have ample discretion to choose amongst competing metrics and methodologies. *WildEarth Guardians*, 368 F. Supp. 3d at 79 (BLM not required to use carbon budgeting because, “[w]hile an agency must apply a sufficient level of rigor to its NEPA analyses, it is within ‘the expertise and discretion of the agency’ to determine the methodologies underlying those analyses.”); *W. Org. of Res. Councils*, 2018 WL 1475470, at *14 (D. Mont. Mar. 26, 2018) (“Plaintiffs identify

¹⁸ In prior cases, many of these same Plaintiffs unsuccessfully argued that BLM should use the social cost of carbon to assess climate impacts. *See, e.g., Wildearth Guardians*, 2020 WL 4784821, at *10-11; *WildEarth Guardians*, 368 F. Supp. 3d at 78-79. In response to the interest in that protocol, *see, e.g.,* AR033767-72 (Plaintiffs’ comments), BLM included an appendix to the EA Addendum addressing the social cost of carbon. AR045105. Plaintiffs’ switch from the social cost of carbon to carbon budgeting does not alter the fact that BLM’s choice of methodology is owed deference. *Comm. to Pres. Boomer Lake Park*, 4 F.3d at 1553; *see also Wilderness Workshop*, 342 F. Supp. 3d at 1158-59 (holding agency not required to use social cost of carbon under NEPA); *Citizens for a Healthy Cmty.*, 377 F. Supp. 3d at 1241 (same); *Appalachian Voices v. FERC*, 2019 WL 847199, at *2 (D.C. Cir. 2019) (same).

no case, and the Court has discovered none, that supports the assertion that NEPA requires the agency to use a global carbon budget analysis.”); *California v. Bernhardt*, No. 4:18-CV-05712-YGR, 2020 WL 4001480, at *37 & n.43 (N.D. Cal. July 15, 2020) (refusing to find that use of carbon budgeting was required). BLM’s method of “quantify[ing] and forecast[ing] aggregate GHG emissions from oil and gas development of the APDs under consideration” and “analyz[ing] and disclos[ing] downstream emissions and compar[ing] those emissions to state (regional), national, and global emissions to the extent reasonable and practicable” is sufficient under NEPA. AR045096; *see supra* 36-37 (collecting cases upholding this methodology).¹⁹

In sum, BLM took a hard look at climate impacts and Plaintiffs’ flyspecking of the agency’s highly technical determinations “do[es] not defeat NEPA’s goals of informed decisionmaking.” *Richardson*, 565 F.3d at 704.

D. BLM Considered the No Action Alternative In the Original EAs.

Plaintiffs argue that BLM was required to analyze the no action alternative in the EA Addendum because without that analysis “BLM never even contemplated the possibility” that the agency’s additional analysis could alter its decision to approve each challenged APD. Pls.’ Br. 37-38. While Plaintiffs are correct that NEPA requires consideration of the no action alternative, 40 C.F.R. § 1502.14 (2018), they ignore that the EA Addendum is not a brand new EA. It is a supplement to BLM’s preexisting EAs for each of the challenged APDs.

¹⁹ Plaintiffs claim without support that carbon budgeting is the “IPCC’s chosen methodology for understanding the severity and significance of emissions.” Pls.’ Br. 37. Needless to say, the IPCC’s assessment of climate change does not assess “significance” for purposes of NEPA. In any case, by making clear that assessing the impacts of emissions on climate change is challenging and highly technical, the IPCC materials in the record reinforce the deference owed to BLM’s analysis. *See, e.g.*, AR038569; AR100542.

AR045037. For each of the APDs, the no action alternative is the scenario where BLM does not approve the APD and the proposed well is not constructed. *See, e.g.*, AR046573, AR072903. That scenario was analyzed in the original EAs. *Id.*; *see also* AR045092 (“A No Action Alternative was considered that would not approve each of the APDs at the time of the original proposal[.]”). Because the no action alternative assumes no development, its impacts (or lack thereof) have not changed since BLM first analyzed them in its original EAs. Nothing in the Tenth Circuit’s decision in *Diné CARE I*—the decision that provided the *raison d’être* for the EA Addendum—required additional analysis of the no action alternative. Thus, once again, Plaintiffs are accusing BLM of engaging in a “purely paperwork exercise” when it is they who want BLM to unnecessarily repeat analysis already done in 81 EAs. Pls.’ Br. 38. As explained *supra*, BLM’s decision to supplement its EAs and to use both the EA Addendum and the original EAs together to “determine whether to affirm BLM’s original decision finding no significant impact and approving the APD or whether to reconsider that decision” is reasonable and complies with NEPA. AR045037; *supra* 11-15.

IV. The Court Should Deny Plaintiffs’ Claims and Dismiss This Case, But If It Decides to Grant Relief, the Proper Relief Is Remand Without Vacatur.

As explained above, BLM complied with NEPA and the APA and therefore Plaintiffs’ claims must be dismissed with prejudice. But if the Court rules in favor of Plaintiff on any of the challenged APDs, the Court should remand without vacatur to allow BLM to address any deficiencies in its analysis without disrupting ongoing development that is benefitting local governments, the State of New Mexico, and Indian allottees.

First, any remedy must be tailored to the challenged agency actions upon which Plaintiffs succeed. Plaintiffs challenge 370 different APDs. Although the EA Addendum is the same for

each APD, the 81 underlying EAs are not identical, as Plaintiffs admit. *See* Pls.’ Br. 14 n.10. Success on an issue as to one APD should not be assumed to mean that Plaintiffs succeed on that issue as to every APD. *See Diné CARE I*, 923 F.3d at 844-45 (refusing to assume that inadequacies of five EAs were reflective of other challenged EAs).

Second, the Court retains equitable discretion to fashion an appropriate remedy and “vacatur may not be appropriate in all cases.” *N.M. Health Connections v. U.S. Dep’t of Health & Human Servs.*, 340 F. Supp. 3d 1112, 1176 (D.N.M. 2018); *see also WildEarth Guardians v. BLM*, 870 F.3d 1222, 1240 (10th Cir. 2017) (declining to vacate oil and gas leases because district court “might fashion some narrower form of injunctive relief based upon equitable arguments”). In determining whether to vacate, courts “must determine whether there is ‘at least a serious possibility that the [agency] will be able to substantiate its decision on remand,’ and whether vacatur will lead to impermissibly disruptive consequences in the interim.” *WildEarth Guardians*, 368 F. Supp. 3d at 84 (quotation omitted).

Here, there is every reason to believe BLM would be able to substantiate its decision on remand. The agency has already shown a willingness to engage in extensive additional analysis to address NEPA deficiencies identified by the judiciary. At the same time, vacatur would have serious consequences. While the Tenth Circuit in *Diné CARE I* remanded to the district court with instructions to vacate, its decision applied to only five EAs. 923 F.3d at 859. Here, there are 81 EAs and 370 APDs at stake. Vacatur of the 370 APDs would force the operators to shut-in 60 producing wells, which are providing jobs as well as taxes and royalties to the local counties, the State of New Mexico, and the United States. *See* ECF No. 44-1 ¶¶ 73, 78; Exhibit A. In addition, many of the wells at issue here are on Indian allotted minerals and produce

royalties for Indian allottees who depend on that income. ECF No. 44-1 ¶ 74. In these circumstances, remand without vacatur is appropriate. *See WildEarth Guardians*, 368 F. Supp. 3d at 84 (remanding oil and gas leasing decisions without vacatur).

CONCLUSION

For the foregoing reasons, the Court should dismiss Plaintiffs' claims with prejudice.

Respectfully submitted this 30th day of October, 2020.

PAUL E. SALAMANCA
Deputy Assistant Attorney General

/s/ Clare Boronow
CLARE BORONOW
Environment and Natural Resources Division
United States Department of Justice
999 18th St.
South Terrace, Suite 370
Denver, CO 80202
Tel: (303) 844-1362
clare.boronow@usdoj.gov

ANDREW A. SMITH
Senior Trial Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Natural Resources Section
c/o United States Attorney's Office
P.O. Box 607
Albuquerque, New Mexico 87103
505-224-1468
andrew.smith@usdoj.gov

Counsel for Federal Defendants

CERTIFICATE OF SERVICE

I hereby certify that on October 30, 2020, I filed the foregoing document electronically through the CM/ECF system which caused all parties or counsel to be served by electronic means as more fully reflected on the Notice of Electronic Filing.

/s/ Clare Boronow
Clare Boronow
Attorney for Federal Defendants

CERTIFICATE OF COMPLIANCE WITH RULE 32

I hereby certify that this brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because this brief contains 12,819 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(f).

/s/ Clare Boronow
Clare Boronow
Attorney for Federal Defendants